

Application Note – Noise Reduction of Garbage Disposer by Coating

We recently converted from a cast iron ceramic coated sink and tile counter tops to solid granite counter tops with stainless steel sinks. We achieved the improved looks and performance of the counter tops, but the stainless steel sinks produced a loud, objectionable noise when the garbage disposer was on. Feeling with my hands showed that the sinks were vibrating at resonant frequencies driven by the garbage disposal. To quantify the sound levels, I purchased a sound level meter and took the following readings:

With disposer off 28 decibels

With disposer on 95 decibels

Reference literature gives examples of 30 decibels as a quiet rural area, and 96 decibels as a power mower, or a motorcycle at 25 feet at 90 decibels.

In searching the internet, I spotted a product, "Silent Running" from Current Inc. of East Haven, CT which claimed to absorb or deaden sounds with the application of a coating. This seemed infinitely easier than removing the sink and somehow modifying it, so I purchased a small container. Following directions, I coated the sinks with five coats of Silent Running, allowing one hour between coats, and ended up with an estimated 200 mm coating. I planned the coating prior to a seven day vacation to allow the coating to set up. On returning, I measured the sound level with the disposer on and got the following reading:

With disposer on 85 decibels

The literature gives examples food blender or garbage disposal of 80 to 88 decibels. The decibel is a logarithmic function (base 10) which means that the reduction from 95 to 85 is roughly equivalent to a four times reduction in noise level.

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